



So you THINK you can THINK?

thinking ... a crucial 21st century skill



Quiz

1. 7 months of the year have 31 days; how many have 28?

- a) 1
- b) 3
- c) 9
- d) 12

JANUARI
FEBRUARI
APRIL MAART
MEI JUNI
JULI AUGUSTUS
SEPTEMBER
OKTOBER
NOVEMBER
DECEMBER



Quiz

2. If there are 3 apples and you take away 2, how many do you have?

- a) 0
- b) 1
- c) 2
- d) 3



Quiz

3. How many animals of each sex did Moses take on the ark?

- a) 0
- b) 1
- c) 2
- d) 3



Quiz

4. An electric train is travelling South at 100 km. The wind is blowing 50 km to the East. Which direction is the smoke going to travel?

- a) Northeast
- b) None of these
- c) Southeast
- d) Southwest



Quiz

5. How much dirt is in a 6m x 6m x 6m hole?

- a) 0 m³
- b) 12 m³
- c) 36 m³
- d) 216 m³

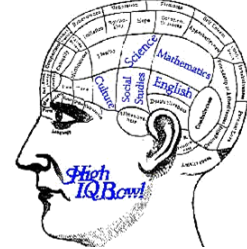


Dr. Bono Expertisecentrum

Quiz

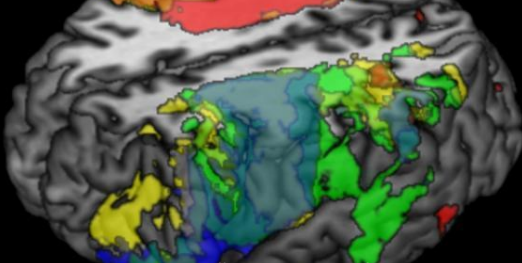
6. According to recent research, what percentage of a successful career has to do with IQ?

- a) 50 to 60 %
- b) 35 to 45%
- c) 23 to 29%
- d) 15 to 20%



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Edward de Bono: "The biggest problem of the world is not climate change or overpopulation, the biggest problem is poor thinking."



Edward de Bono: "The quality of our thinking will determine the quality of our future."

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Think out of THE BC

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Assumptions

- Everyone is creative in some way
- Creative skills can be learned
- Creativity requires structure

Intelligence (creativity) is a potential, thinking a skill.



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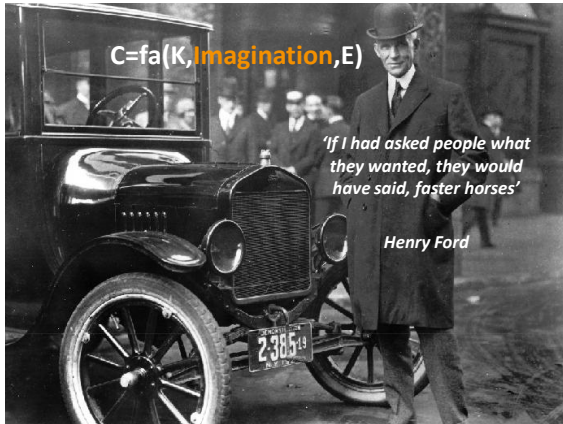
Creativity = ATTITUDE!

Ruth Noller's Creativity Formula

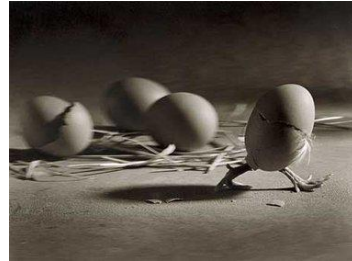


Creativity = function of attitude (knowledge, imagination and evaluation)

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Thinking; Skills and Attitude

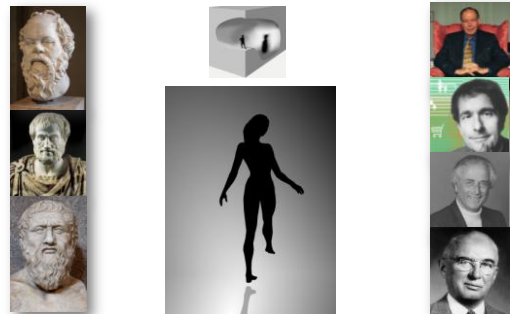


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Suspension of judgment

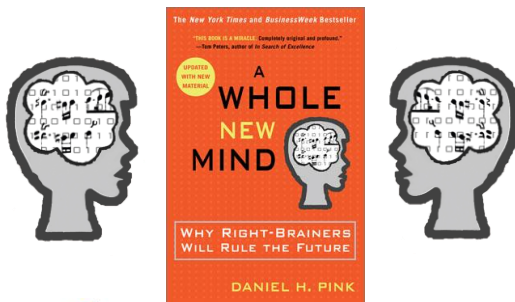


Creative, critical & metacognitive thinking



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A Whole NEW Mind

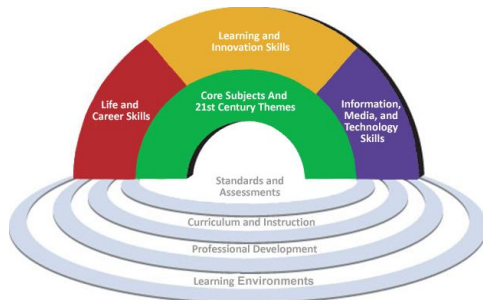


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Framework for 21st Century Learning



Dr. Ronan Expertise



Information, Media, and Technology Skills

- Information Literacy
- Media Literacy
- Information and Communications Technology (ICT) Literacy

Learning and Innovation Skills

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

Life and Career Skills

- Flexibility and Adaptability
- Initiative and Self-Direction
- Social and Cross-Cultural Skills
- Productivity and Accountability
- Leadership and Responsibility

Source: Partnership for 21st Century Skills, 2009a. Reprinted with permission.

Dr. Ronan Expertise

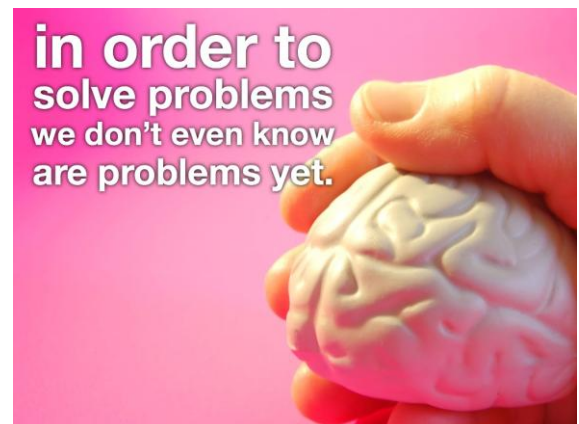
21st Century Skills

Rethinking How Students Learn, Edited by James Bellanca and Ron Brandt, U.S.A. 2010

- People can expect to have many jobs in multiple fields during their careers.
- The average person born in the later years of the babyboom held 10.8 jobs between the ages of 18 and 42.
(Bureau of Labor Statistics, U.S. Department of Labor, 2009)



Dr. Ronan Expertise



How well do schools prepare students to join today's world?

Applied Skill	Gap Between High Need & Provision
Creativity	68.6%
Ethics	55.0%
Professionalism	47.5%
Lifelong Learning	44.1%
Critical Thinking	43.6%
Written Communication	37.0%
Diversity	33.3%
Oral Communication	31.3%
Teamwork	24.5%
Information Technology	24.4%
Leadership	22.6%

Source: Society for Human Resource Management (2009)



How well do schools prepare students to join today's world?

"Our schools, on the whole, are **hostile to ideas**. Too often, our tests ask students to come up with the **one right answer**, and the curriculum, pegged to tests, **penalizes the creative student** rather than rewarding him or her for the unexpected but thoughtful – or even brilliant response."



Tough Choices or Tough Times (2008)



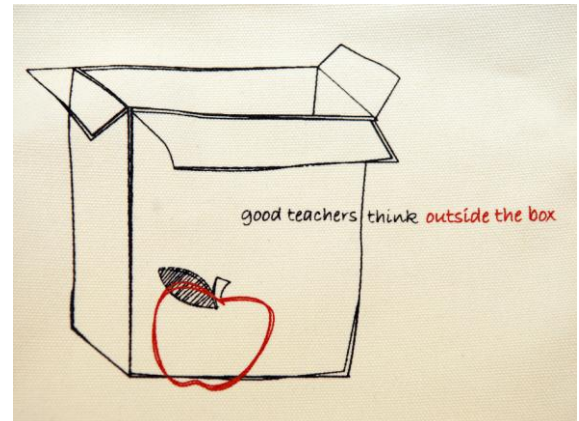
IBM 2010 Global CEO Study

This study is based on face-to-face conversations with more than 1,500 chief executive officers worldwide.

Creativity Selected as Most Crucial Factor for Future Success



IBM



Values



- We are a Community College
- We count all talents
- We consider creative thinking a core competence
- We strive for mastery learning
- We go for a better world



Goals / Activities



Implementation / integration of thinking skills in the curriculum

Activities

- Training teachers / leaders
- Research and Development
- Facilitating in the College and for business / stakeholders
- Supporting initiatives in (educational) departments
- Being a centre of expertise



Tools and sources of inspiration

Sources of inspiration e.g.

- Howard Gardner
- Edward de Bono
- Alex Osborn
- Sidney Parnes
- Stephen Covey
- Daniel Pink
- Chip & Dan Heath
- Mihaly Csikszentmihalyi
- Tony Buzan
- Ken Robinson
- Michael Gelb



Tools e.g..

- Six Hats
- Lateral Thinking
- Direct Attention Thinking Tools
- Creative Problem Solving
- Divergent thinking
- Convergent thinking
- Multiple Intelligences
- Scenario thinking
- Socratic thinking
- 7 steps of Da Vinci
- Debating techniques
- Mind Mapping

Copy Paste Approach



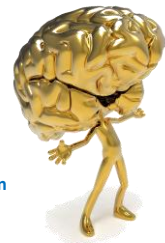
Thinking Tools



Koning Willem I College: Ontwerp toolbox

Minimal goals attitude

1. Curiosity
2. Looking for alternatives
3. Delay of judgement
4. Other persons' view / perception
5. Fun



Finally



Thank you!

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